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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/791,018  | 03/02/2004  | Duanfeng He          | 1400-45 (1602)      | 1312             |
| 7590  | 10/27/2005  |                      | EXAMINER            |                  |
| David M. Carter<br>Carter, DeLuca, Farrell & Schmidt, LLP<br>Suite 225<br>445 Broad Hollow Road<br>Melville, NY 11747 |             |                      | PAIK, STEVE S       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2876                |                  |
| DATE MAILED: 10/27/2005   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/791,018             | HE ET AL.           |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Steven S. Paik         | 2876                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 02 March 2004.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1,6-9,12,14,15,17,21-28,30,31,35 and 36 is/are rejected.

7)  Claim(s) 2-5,10,11,13,16,18-20,29 and 32-34 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 02 March 2004 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/23/05 & 1/13/04.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 22 is objected to because of the following informalities: the limitation, "the housing" in line 2 appears to be -- a housing -- in order to precisely recite the claimed invention. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 22-25 and 27, 28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Attia et al. (US 2005/0011957 A1).

Re claim 22, Attia et al. disclose a handheld processing device (mobile device 105) comprising:

an illuminated display (display of the mobile device 105) disposed with the housing (see Fig. 1) for displaying data (Fig. 5A –5C), the illuminated displaying being configured to provide an extended light-beam for illuminating an optical code (103 and [0070]);

a camera (digital camera 107) disposed within the housing for sensing the optical code (103) illuminated by the illuminated display and generating corresponding signals; and at least one processor configured for processing the signals ([0075]-[[0108]]).

Re claim 23, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, further comprising a light source providing narrow-beam illumination to the optical code ([0015] discloses an example of a CCD devices and a barcode device using a laser light which produces a narrow-beam illumination.).

Re claim 24, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, wherein the handheld processing device is a handheld computer device ([0025]).

Re claim 25, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, wherein the handheld processing device is a mobile phone (Fig. 1; 105).

Re claim 27, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, wherein the camera includes an auto-focus system for automatically focusing light reflected by the optical code onto the image sensor ([0070]).

Re claim 28, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, wherein the optical code is selected from a group comprising: UPC, Data Matrix, and QR codes ([0057]).

Re claim 30, Attia et al. disclose the handheld processing device as recited in rejected claim 22 stated above, 30. The handheld processing device as in Claim 22, wherein the at least one processor (API; decoding engine; and camera control module 305; [0073]) further controls the light source.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 6-9, 12, 14, 15, 17, 21, 26, 31, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Attia et al. (US 2005/0011957 A1) in view of Roosendaal et al. (US 6,819,386B2).

Re claims 1, 7, 26, 31, 35 and 36, Attia et al. disclose a system and method for decoding barcodes using mobile device. Generally, the barcode image is acquired via a digital camera attached to the mobile device. After the barcode image has been acquired, software located on the mobile device enhances the barcode image and subsequently decodes the barcode information. The barcode information is then transmitted to a server via a wireless network. The server processes the barcode information and transmits media content related to the barcode back to the mobile device. The mobile device comprises, among other things, an illuminated display, a memory storing an application program such as the ScanZoom software, and a processor processing barcode image captured by a digital camera 107.

However, Attia et al. are silent about an extended light source emitting an extended-beam light including one of a backlight assembly and a frontlight assembly.

Roosendaal et al. disclose a transreflective display device with a light-modulating device. In one of the viewing directions, the light source works as a backlight assembly, and the other viewing direction, the light source works as a frontlight assembly (col. 3, ll. 27-67). The light source provides a considerable cost-saving effect by utilizing a lamp functioning as a frontlight and a backlight based on a viewing direction.

In view of Roosendaal et al., it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further employ the transreflective display device in addition to the display of the mobile device of Attia et al. due to the fact that optical code image data can be more clearly displayed on the display for the purposes of improving readability of an optical code captured by an imaging device such as a digital camera integrated within a mobile device.

Re claim 6, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 1 stated above, wherein the at least one processor is further configured for determining the imaged optical code's code-type, wherein the code-type is selected from the group comprising: a UPC code-type, a DataMatrix code-type or a QR code-type ([0092] of Attia et al.).

Re claim 8, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 7 stated above, wherein the handheld device is one of a handheld computer device and a mobile phone ([0025]).

Re claim 9, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 1 stated above, further comprising a display screen (Fig. 1) for displaying data, wherein the extended light source further provides illumination for the display of data on the display screen to a user.

Re claim 12, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 1 stated above, wherein the extended light source includes a plurality of LEDS (35a and 35b) and a lightpipe (light modulating device 10) receiving light emitted by the plurality of LEDS and emitting the extended-beam light.

Re claim 14, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 1 stated above, further comprising an LCD positioned in front of or behind the extended light source (Fig. 6 and col. 3, ll. 27-67 of Roosendaal).

Method claim 15 is essentially the same in scope as apparatus claim 1 and is rejected similarly.

Method claim 17 is essentially the same in scope as apparatus claim 6 and is rejected similarly.

Re claim 21, Attia et al. in view of Roosendaal et al. disclose the optical code reading system as recited in rejected claim 15 stated above, further comprising the step of clearing data displayed on a display screen coupled to the at least one of the backlight and frontlight assembly prior to illuminating the optical code ([0070] of Attia et al.).

***Allowable Subject Matter***

7. Claims 2-5, 10, 11, 13, 16, 18-20, 29, and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of

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the limitations of the base claim and any intervening claims. The prior art of the record does not disclose, teach, or fairly suggest a optical code reader comprising, among other things, one direct point light source for illuminating an optical code with narrow-beam light and a processor for selectively operating one of the extended light source and the at least one of direct point light source.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lieu (US 2004/0017361 A1) discloses an electronic device that is interoperable with at least two modules to perform different types of functions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 571-272-2404. The examiner can normally be reached on Monday - Friday 5:30a-2:00p (Maxi-Flex\*).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Primary Examiner  
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